

1. Use of an amphipathic compound comprising a lipophilic group derived from a sterol linked to a cationic group, for the production of a vaccine composition.
2. <sup>Use</sup> Use according to Claim 1, characterized in that the lipophilic group is a cholesterol derivative.
3. <sup>Use</sup> Use according to <sup>Claim 1</sup> ~~either of the preceding claims~~, characterized in that the cationic group is a quaternary ammonium or an amine which can be protonated.
4. <sup>Use</sup> Use according to <sup>Claim 1</sup> ~~one of the preceding claims~~, characterized in that the lipophilic group is attached to the cationic group via an ester, ether, amide or carbamoyl link.
5. <sup>Use</sup> Use according to <sup>Claim 1</sup> ~~one of the preceding claims~~, characterized in that the lipophilic group is separated from the cationic group by a branched or unbranched alkyl chain comprising from 1 to 20 carbon atoms.
6. <sup>Use</sup> Use according to <sup>Claim 1</sup> ~~one of the preceding claims~~, characterized in that the amphipathic compound is selected from the following compounds:
- cholesteryl-3 $\beta$ -carboxamidoethylenetrimethyl-ammonium iodide,
  - cholesteryl-3 $\beta$ -carboxamidoethylenamine,
  - cholesteryl-3 $\beta$ -oxysuccinamidoethylene-trimethylammonium iodide,

-  $3\beta$ -[N-(N',N'-dimethylaminoethane)carbamoyl]-  
cholesterol,

-  $3\beta$ -[N-(polyethylenamine)carbamoyl]cholesterol.

7. <sup>A use</sup>~~Use~~ of  $3\beta$ -[N-(N',N'-dimethylaminoethane)-  
5 carbamoyl]cholesterol for the production of a vaccine  
composition.
8. <sup>A use</sup>~~Use~~ according to <sup>claim 1</sup>~~one of the preceding claims~~,  
characterized in that the amphipathic compound is  
combined with a neutral lipid.
- 10 9. <sup>A use</sup>~~Use~~ according to Claim 8, characterized in that  
the proportion of neutral lipid combined is at least  
20%.
10. <sup>A use</sup>~~Use~~ according to <sup>Claim 8 or 9</sup>~~either of claims 8 and 9~~,  
characterized in that the neutral lipid is  
15 dioleoylphosphatidylethanolamine (DOPE) or  
dioleoylphosphatidylcholine (DOPC).
11. <sup>A use</sup>~~Use~~ according to <sup>claim 1</sup>~~one of the preceding claims~~,  
characterized in that the amphipathic compound is  
dispersed in an aqueous environment in the form of  
20 liposomes.
12. <sup>A use</sup>~~Use~~ of an amphipathic compound comprising a  
lipophilic group derived from a sterol linked to a  
cationic group, as an adjuvant in the administration of  
a vaccine.
- 25 13. <sup>A use</sup>~~Use~~ according to Claim 12, characterized in that  
the said amphipathic compound is  $3\beta$ -[N-(N',N'-dimethyl-  
aminoethane)carbamoyl]cholesterol.

- 24 - *Claim 12 or 13*

14. ~~Use~~ *A use* according to ~~either of Claims 12 and 13,~~  
characterized in that the said amphipathic compound is  
combined with a neutral lipid.

15. ~~Vaccine~~ *A vaccine* composition comprising at least one  
antigen, characterized in that it comprises, in  
addition, at least one amphipathic compound possessing a  
lipophilic group derived from a sterol linked to a  
cationic group.

16. ~~Vaccine~~ *A vaccine* composition according to Claim 15,  
characterized in that the said lipophilic group is a  
cholesterol derivative.

17. ~~Vaccine~~ *A vaccine* composition according to ~~either of~~ *Claim 15 or 16*  
~~Claims 15 and 16,~~ characterized in that the said  
amphipathic compound is  $3\beta$ -[N-(N',N'-dimethyl-  
aminoethane)carbamoyl]cholesterol.

18. ~~Vaccine~~ *A vaccine* composition according to ~~one of~~ *Claim 15*  
~~Claims 15 to 17,~~ characterized in that the said  
amphipathic compound takes the form of liposomes  
including at least one antigen.

19. ~~Vaccine~~ *A vaccine* composition according to ~~one of~~ *Claim 15*  
~~Claims 15 to 18,~~ characterized in that the said  
amphipathic compound is combined with a neutral lipid.

20. ~~Vaccine~~ *A vaccine* composition according to ~~one of~~ *Claim 15*  
~~Claims 15 to 19,~~ characterized in that it comprises at  
least one influenza virus antigen.

21. ~~Method~~ *A method* for inducing an immune response in a  
mammal, consisting in administering at least one antigen  
to the mammal, characterized in that it consists in  
administering, in addition, at least one amphipathic

compound comprising a lipophilic group derived from a sterol linked to a polar group.

22. <sup>A method</sup>~~Method~~ according to Claim 21, characterized in that the said amphipathic compound is administered at  
5 the same time as the antigen.

23. <sup>A method</sup>~~Method~~ according to <sup>Claim 21 or 22</sup>~~either of Claims 21 and 22~~, characterized in that the antigen is an influenza virus haemagglutinin.

24. <sup>A product</sup>~~Product~~ containing at least one antigen and one  
10 amphipathic compound comprising a lipophilic group derived from a sterol linked to a cationic group, as a combination product for use simultaneously, separately or staggered over time in vaccination.

Not  
B2

Not  
C1